# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/851,038 | 05/07/2001 | Quintin T. Phillips | 10003896-1 | 2163 |

| 7590 | 01/13/2006 |
|---|---|

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

| EXAMINER |
|---|
| PHAM, THIERRY L |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2624 | |

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) |
| --- | --- | --- |
| | 09/851,038 | PHILLIPS, QUINTIN T. |
| **Office Action Summary** | Examiner | Art Unit |
| | Thierry L. Pham | 2624 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on *13 October 2005*.

2a) ☒ This action is **FINAL.**    2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) *1-11,29,30 and 34* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-11,29,30 and 34* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

## DETAILED ACTION

- This action is responsive to the following communication: an Amendment filed 10/13/05.
- Claims 1-11, 29-30, and 34 are pending; claims 12-28, and 31-33 have been canceled.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The original filed specification fails to provide any adequate written description in regards to newly added limitations/features "where the visual representation of the print job can be displayed with a selected alternate color scheme from the one or more alternate color scheme to provide a selectable options" as cited in amended claim 1. The examiner fails to find any relevant portion of the original filed specification that teaches the newly added features. As shown in fig. 4A, a print job is displayed without affected toner color (step 414) after receiving non-optimal conditions from host computer prior to alternate color scheme selection, however, it fails to teach and/or suggest visual representation of the print job with "alternate color scheme" *selected* by the user. In other words, the original filed specification suggests a plurality of alternate color schemes (step 424 of fig. 4a) can be selected by a user to replace an affected color toner, but does not suggest displaying a visual representation of the print job with user selected color scheme.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, and 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama et al (US 6771378) and Kurachi (US 6181436), and further in view of Nakagiri et al (US 6965440). Regarding claim 1, Akiyama discloses a method comprising:

• submitting a print job to a print device (submitting a print job from the host computer, fig. 1);

• receiving notification from the print device that a non-optimal condition exists with one or more consumables (selected color toner to be printed is empty and suggesting an alternate color schemes, figs. 11, 21-24, 45-47);

• displaying (i.e. message 33, fig. 21) a warning message about a toner color affected by the non-optimal condition;

• suggesting one or more alternate color schemes (suggesting an alternate color schemes, fig. 21-24) to use for the print job; and

• if an alternate color scheme is selected, resubmitting (resubmitting the print job with alternate color schemes, fig. 21-24) the print job with the alternate color scheme to the print device.

Akiyama fails to teach and/or suggest in response to receiving the notification from printer device, the host computer displays a visual representation of the print job without the affected toner color.

Kurachi, in the same field of endeavor for printing, teaches in response to receiving the notification from printer device, the host computer displays a visual representation of the print job without the affected toner color (printer device 3 transmits a rough image (fig. 5) representing a print job to be displayed on a host computer 1, col. 2, lines 25-32).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify printing system of Akiyama to include a method for displaying a visual representation of the print job as taught by Kurachi because of a following reason: (•) allowing the user to easily identify the print jobs that failed due to non-optimal conditions existed within the printer (i.e. empty toner as taught by Akiyama) by identifying the rough images and to select the print jobs easily and correctly (Kurachi, col. 3, lines 35-37); (•) combinations of Akiyama

and Kurachi allow users to identify failed print job and to select different color toner to complete a failed print job.

However, combinations of Akiyama and Kurachi fail to teach and/or suggest the visual representation of the print job can be displayed with a selected alternate color scheme from the one or more schemes to provide a selectable option.

Nakagiri, in the same field of printing, teaches a visual representation of the print job can be displayed with a selected alternate color scheme from the one or more schemes to provide a selectable option (print preview with selected color scheme, figs. 8 & 13, in addition, previewing a print job prior submitting to a printer is well known in the art).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify printing system of Akiyama and Kurachi to include a print preview method for previewing a visual representation of the print job with a selected alternate color scheme from the one or more schemes to provide a selectable option as taught by Nakagiri because of a following reason: (●) allowing users to preview a print job before submitting to a print device to ensure the right alternate color scheme is selected for a print job, by doing so, it prevents bad print outputs from printing.

Therefore, it would have been obvious to combine Akiyama and Kurachi with Nakagiri to obtain the invention as specified in claim 1.

Regarding claim 2, Akiyama further discloses a method as recited in claim 1, wherein resubmitting the print job further comprises: adjusting the color gamut (obviously, prior to print a print job with an alternate color schemes, the printer must adjusts the color gamut before printing the print job with altered color toners, figs. 21-24) of the print device according to the selected alternate color scheme.

Regarding claim 4, Akiyama further discloses a method as recited in claim 1 further comprising: presenting print options (fig. 19-20) for selection; and executing a selected print option, the print options comprising; canceling the print job (stop button, fig. 19-20); permitting the print job to print with the non-optimal condition (execute button, fig. 19-20); permitting the print job to print without the affected toner color (execute button, fig. 19-20); redirecting the

print job to an alternate print device (it is known in the art to select different printers if the current printer is failed, i.e., one of ordinary skill in the art would press the "stop" button as shown in fig. 23-24 and then selecting a different printer to complete the unfinished print job sin the system as shown in fig. 1 is connected via a network; pausing to permit correction of the non-optimal condition and then printing the print job (i.e., message 3, fig. 19); and printing the print job in grayscale (gray of message 5, fig. 23).

Regarding claim 5, Akiyama further discloses a method as recited in claim 1, wherein the non-optimal condition is a low toner level (fig. 35, col. 24, lines 8-10) for one of a plurality of toner colors in an all-in-one toner cartridge (print head 303 contains plurality of ink toners 302, fig. 37).

Regarding claim 6, Akiyama further disclose a method as recited in claim 1, wherein the non-optimal condition is a depleted toner color (empty toner, fig. 17) for one of a plurality of toner colors in an all-in-one toner cartridge (print head 303 contains plurality of ink toners 302, fig. 37).

Regarding claim 7, Akiyama further discloses a method as recited in claim 1, wherein the non-optimal condition is a low toner level (fig. 35, col. 24, lines 8-10) for one of a plurality of toner colors each located in a separate toner cartridge (toners 23a-23d, fig. 36).

Regarding claim 8, Akiyama further discloses a method as recited in claim 1, wherein the non-optimal condition is a depleted toner (empty toner, fig. 17) color for one of a plurality of toner colors each located in a separate toner cartridge (toners 23a-23d, fig. 36).

Regarding claims 9-10, a method for detecting worn photoconductor and transfer element are widely available and known in the art.

Regarding claim 11, Akiyama further discloses a computer-readable media (memory 107, fig. 1) having computer-readable instructions for performing the method as recited in claim 1.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama, Kurachi, Nakagiri as described in claim 1, and further in view of Yabe (US 5907415).

Regarding claim 3, Akiyama discloses a method for selecting an alternate color scheme for completing the unfinished print job if non-optimal condition exists (i.e. empty color toner), but fail to explicitly teach and/or suggest a method for adjusting color gamut comprises:
● accessing a color look-up table; and
● mapping the color gamut of the print device to the color look-up table to replace non-reproducible colors in the print job.

Yabe, in the same field of endeavor for printing environment, teaches a method for adjusting color gamut comprises: accessing a color look-up table (color reproduction gamut of printer, fig. 3); and mapping the color gamut (color gamut mapping unit 30, fig. 1) of the print device to the color look-up table to replace non-reproducible colors in the print job. Please also notes, the method for adjusting color gamut and look-up table are widely available and known in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Akiyama, Kurachi, and Nakagiri as per teachings of Yabe by incorporating a method of adjusting color gamut including accessing a color look-up table and mapping the color gamut of the print device to the color look-up table to replace non-reproducible colors in the print job because of a following reason: (●) to perform an image processing capable of producing high-quality image (Yabe, col. 1, lines 24-30) by accessing a color look-up table to reproduce the altered color schemes accurately; (●) using color look up table provides fast searching and to eliminate calculation processes, therefore, improving printing speed.

Therefore, it would have been obvious to combine Akiyama, Kurachi, Nakagiri with Yabe to obtain the invention as specified in claim 3.

Claims 29-30, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama et al (US 6771378), and in view of Munetomo et al (US 6661530).

Regarding claim 29, Akiyama discloses a computer coupled to a print device (fig. 1), the print device comprising a consumable component having a monitoring device (ink sensor 108, fig. 1) configured to detect a non-optimal condition (i.e. ink status, fig. 2a) of the consumable component, the computer comprising:

● a printer controller (driver 114 incorporated within the host computer, fig. 1) configured to send a print job to the print device;

● the printer controller further configured to receive information from the monitoring device and provide options for managing a non-optimal condition (i.e. status of ink toners, figs. 21-24) the options comprising:

● canceling the print job (stop button, fig. 21-24);

● permitting the print job to print with the non-optimal condition (execute button, fig. 21-24);

● permitting the print job to print without a toner color affected by the non-optimal condition (execute button, fig. 21-24);

● pausing (pausing the print job to replace a new cartridge toner, fig. 17) the print job to permit correction of the non-optimal condition and then permitting the print job to print;

● permitting the print job to print in grayscale (gray scale, fig. 23);

However, Akiyama fails to explicitly disclose wherein a printer controller visually presenting the print job in one or more selectable alternate color schemes, each alternate color scheme excluding the toner color affected by the non-optimal condition, and to redirecting the print job to an alternate print device.

Munetomo, in the same field of endeavor for printing, teaches a method for displaying a visual representation of the print job without the affected toner color (print preview of print job with selected color attributes as shown in figs. 12-13, and please notes that print preview of a print job before submitting to a printer is widely known and available in the art), and redirecting the print job to an alternate print device (it is also known the art to select a different printer if the current printer is failed due to non-optimal conditions such as empty toner, one of ordinary skill in the art would "stop" the failed printer and select another print since the system as shown in fig. 1 is connected via a network).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Akiyama as per teachings of Munetomo by incorporating a method including a

method for displaying a visual representation of the print job without the affected toner color (i.e. print preview) before submitting to the printer device, by doing so, it allows users/operators to determine whether the printed product meets the customer's specs; to allow users/operators to see how the printed product should look like before printing by the printer, thereby, preventing wasteful inks.

Therefore, it would have been obvious to combine Akiyama with Munetomo to obtain the invention as specified in claim 29.

Regarding claim 30, Akiyama further discloses a computer as recited in claim 29, wherein the printer controller is further configured to adjust the color gamut of the print device according to a selected alternate color scheme and resend the print job to the print device for printing (obviously, the print data must be adjusted to the color gamut of the print device before printing a print job with altered color toners if the selected color toner is empty, fig. 23-24)

Regarding claim 34, Akiyama discloses a system (print system, fig. 1) comprising:
a computer (computer, fig. 1);
a electrophotographic print device (printer, fig. 1) coupled to the computer, the print device comprising a consumable component including one or more of a toner cartridge, a photoconductor, or transfer element (ink cartridge, fig. 1);
the consumable component comprising a monitoring device (ink sensor, fig. 1) configured to send information about the condition of the consumable component to the computer (ink toner status, fig. 21-24);
the computer further configured to look up one or more alternate color schemes (alternate color schemes, fig. 21-24) based on the condition of the consumable component and display the print job with the one or more alternate color schemes;
the computer further configured to send the print job to the electrophotographic print device to be printed with an alternate color scheme (figs. 21-24).

Munetomo, in the same field of endeavor for printing, teaches a method for displaying a visual representation of the print job without the affected toner color (print preview of print job

with selected color attributes as shown in figs. 12-13, and please notes that print preview of a print job before submitting to a printer is widely known and available in the art).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Akiyama as per teachings of Munetomo by incorporating a method including a method for displaying a visual representation of the print job without the affected toner color (i.e. print preview) before submitting to the printer device, by doing so, it allows users/operators to determine whether the printed product meets the customer's specs; to allow users/operators to see how the printed product should look like before printing by the printer, thereby, preventing wasteful inks.

Therefore, it would have been obvious to combine Akiyama with Munetomo to obtain the invention as specified in claim 34.

### *Response to Arguments*

Applicant's arguments filed 10/13/05 have been fully considered but they are not persuasive.

• Regarding claim 1, the applicant argued the cited prior arts of record (US 6771378 and US 6661530) fail to teach and/or suggest "visual representation of the print job without the affected toner color is displayed in response to receiving the notification" as amended in claim 1.

In response, the examiner notes that newly added features/limitations *"in response to receiving the notification"* introduce new issues and changes the scope of previous claim 1 and herein, the examiner has introduced a new ground of rejection to remedy new issues.

• Regarding claims 9-10, the applicant argued "detecting a photoconductor and transfer element are not well known in the art".

In response, the examiner has cited (See Conclusion Section for details) relevant prior arts to remedy such arguments.

• Regarding claim 29, the applicant argued the cited prior arts of record (US 6771378 and US 6661530) fail to teach and/or suggest "visually presenting the print job".

In response, US 6771378 to Akiyama clearly teaches a failed print job (i.e. print job not yet complete due to empty toner) can be printed with alternate color scheme (figs. 17-24). However, Akiyama fails to teach and/or suggest visually displaying a print job with selected color scheme prior submitting to print device.   US 6661530 to Munemoto et al teaches a method for previewing a print job with selectable attributes before submitting to a print device for outputting. Clearly, Akiyama and Munemoto are combinable because it allows users/operators to view the print job to determine whether the printed product meets the customer's specs before outputting; to allow users/operators to see how the printed product should look like before printing by the printer, thereby, preventing wasteful inks. The applicant also argued "redirecting the print job to an alternate print device is not well known and not available in the art at the time of the invention". In response to applicant's arguments, the examiner has cited (see Conclusion Section) relevant prior arts to remedy such deficiency.

● Regarding claim 34, the applicants should submit an argument under the heading "Remarks" pointing out disagreements with the examiner's contentions.  Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them. Arguments with respect to claim 34 are inefficient and incomplete.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

● US 6563944 to Kumada teaches an example of redirecting a print job to an alternate printer due to printing errors.

● US 5630062 to Okutsu teaches an example of redirecting a print job to an alternate/substitute printer due to printing errors.

● US 5845057 to Takeda teaches an example of redirecting a print job to an alternate/substitute printer due to printing errors

● US 6452692 to Yacoub teaches an example of redirecting a print job to an alternate/substitute printer due to printing errors.

- US 5778279 to Kawai et al, teaches an example of detecting worn photoconductor and transfer element (i.e. photoconductive drum 21 of fig. 2) in an image forming apparatus.


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.   Accordingly, **THIS ACTION IS MADE FINAL.**   See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
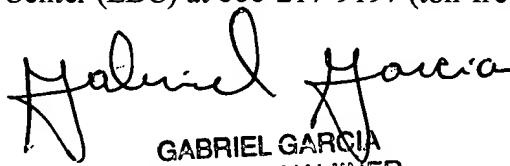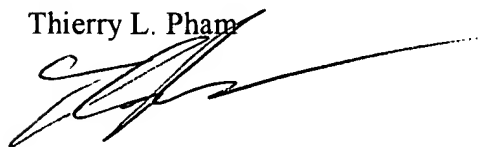
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action.  In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action.  In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437.  The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.  Status information for published applications may be obtained from either Private PAIR or Public PAIR.  Status information for unpublished applications is available through Private PAIR only.  For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham

GABRIEL GARCIA
PRIMARY EXAMINER